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#744

Erler & Kalinowski, Inc.
Consulting Engineers and Scientists
Santa Monica Business Park
2951 28th Street, Suite 1020
Santa Monica, California 90405
(310) 314-8855
Fax (310) 314-8860

4 June 1999

Ms. Ana Townsend
Site Cleanup Unit
California Regional Water Quality Control Board
Los Angeles Region
320 4th Street, Suite 200
Los Angeles, CA 90013

Subject: Quarterly Progress Report for January to March 1999
For the Jervis B. Webb Company Property at
5030 Firestone Boulevard, South Gate, California
(RWQCB SLIC File No. 744; EKI 961025.02)

Dear Ms. Townsend:

On behalf of Jervis B. Webb Company of California ("Webb"), Erler & Kalinowski, Inc. ("EKI") is pleased to submit the enclosed *Quarterly Progress Report for January to March 1999*, dated 4 June 1999. This report describes the activities completed at the Webb property located at 5030 Firestone Boulevard in South Gate ("Site") during the period from January through March 1999.

We have received your letter dated 18 May 1999 regarding EKI's *Workplan for Clarifier Removal and Soil Remediation by Soil Vapor Extraction*, dated 14 April 1999, and have begun the work as authorized. With respect to the requirements to conduct quarterly groundwater monitoring and to submit a quarterly groundwater monitoring and sampling plan by 28 June 1999, we are currently implementing quarterly groundwater monitoring in accordance with the *Project Tasks, Schedule, and Work Plan for Additional Groundwater Investigation and Quarterly Groundwater Monitoring at the Jervis B. Webb Company Property* prepared by EKI, dated 29 September 1998. We propose to continue groundwater monitoring pursuant to the existing workplan, dated 29 September 1998 and, therefore, request that the requirement for submission of a new workplan be waived.

Please advise us if our proposal to continue monitoring groundwater pursuant to the existing workplan is acceptable. Thank you.

Very truly yours,
ERLER & KALINOWSKI, INC.

Steven G. Miller, P.E. (CE, Cert. 43419)
Project Manager

cc: Mr. Eli Stanesa, Jervis B. Webb Company

Quarterly Progress Report for January to March 1999

Jervis B. Webb Company Property
5030 Firestone Boulevard
South Gate, California

4 June 1999

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Jervis B. Webb Company Property
5030 Firestone Boulevard, South Gate, California
Quarterly Progress Report for January to March 1999

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Quarterly Progress Report for January to March 1999

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1. INTRODUCTION

Erler & Kalinowski, Inc. ("EKI") has prepared this *Quarterly Progress Report for January to March 1999* for the property located at 5030 Firestone Boulevard and 9301 Rayo Avenue in South Gate, California Avenue (collectively referred to as the "Site," see Figure 1). The principal objectives of the activities performed during this quarter were to 1) obtain additional data on the groundwater elevations and concentrations at the Site, and 2) prepare a workplan for soil remediation at the Site. The work documented in this report was performed of behalf of the Jervis B. Webb Company ("Webb"). The property at 5030 Firestone Boulevard is owned by Webb ("Webb property") and the adjacent property at 9301 Rayo Avenue is owned by Reliable Steel Building Products, Inc. ("Reliable Steel").

EKI has performed the following activities in order to investigate of areas of environmental concern at the Site since October 1997:

- Installation of soil borings and collection of soil samples;
- Installation of five groundwater monitoring wells (MW-1 – MW-5);
- Collection of groundwater elevation data from the on-site groundwater monitoring wells;
- Collection and analysis of groundwater samples from the existing five groundwater monitoring wells and from former monitoring wells DIAL MW-4 and DIAL MW-5;
- Collection of soil data using cone penetrometer testing;
- Collection and analysis of groundwater samples utilizing using Hydropunch sampling; and
- Collection and analysis of soil gas samples.

The results of EKI's previous investigations were reported in the following documents:

- *Phase II Soil Investigation Report*, 18 February 1998;
- *Phase II Groundwater Investigation Report*, 30 June 1998; and
- *Additional Groundwater Investigation and Quarterly Monitoring Report for October to December 1998*, 13 January 1999.

Chemical analyses of the soil collected at the Site detected two volatile organic compounds ("VOCs"): trichloroethene ("TCE") and tetrachloroethene ("PCE"). Additional VOCs were detected in groundwater and soil gas samples collected at the site; however, the concentrations of TCE and PCE detected were generally higher than the concentrations for other VOCs.

2. QUARTERLY GROUNDWATER MONITORING

2.1. Measurements of Groundwater Elevation

The depth to groundwater in monitoring wells MW-1 through MW-5 was measured on 19 January, 3 February, and 30 March 1999 (see Figure 2 for well locations). These data are provided in Table 1. The depth to the groundwater at the Site is approximately 43 ft bgs. Contours representing the elevation of the groundwater table on 19 January, 3 February, and 30 March 1999 are shown on Figures 3, 4, and 5, respectively. As inferred from the contours of groundwater elevation shown on Figures 3, 4, and 5, the primary direction of groundwater flow in the groundwater table aquifer beneath the Site appears to be toward the south.

2.2. Groundwater Sampling

2.2.1. Groundwater Sampling Procedures

Prior to sampling of groundwater, each well was purged of a minimum of three well-casing volumes of groundwater using a submersible, electric pump. Groundwater purging was performed by West Hazmat and groundwater samples were collected by EKI. All down-hole equipment was thoroughly steam cleaned before use at each well.

During purging of groundwater on 3 February 1999, groundwater quality parameters were recorded by EKI (temperature, pH, conductivity, and turbidity). Water quality monitoring equipment was calibrated prior to commencement of groundwater purging. For each purge sample, the time, water quality parameters, and volume of purged groundwater were recorded on field purge forms (see Appendix A). Purging at each well was continued until parameters stabilized to within approximately 10%. Groundwater quality parameters were generally stable after purging three casing volumes of water from each well. Final turbidity was generally low, between 1.5 and 5 nephelometric turbidity units (see Appendix A).

Groundwater samples were collected by EKI using disposable polyethylene bailers. A new bailer was used to sample each well. A sample label that included a unique sample identification number, the time, and the date when the sample was collected was attached to each sample container. Sample containers were sealed in zip-lock plastic bags and placed in a cooler with ice for temporary storage and transport to the laboratory. Chain-of-Custody forms were initiated in the field and included with the samples. Laboratory reports and Chain-of-Custody forms for groundwater samples are attached in Appendix B.

2.2.2. Analytical Results for Groundwater Samples

Samples of groundwater were collected from monitoring wells MW-1 through MW-5 on 3 February 1999. In addition, a duplicate sample of groundwater was collected from well MW-5 on 3 February 1999. All samples of groundwater were submitted to Orange Coast for volatile organic compound ("VOC") analyses using EPA Method 8260. The analytical results for groundwater samples collected during this monitoring event are summarized in Table 2.

TCE, PCE, cis- and trans- 1,2-dichloroethene ("c-1,2-DCE" and t-1,2-DCE"), 1,1-dichloroethene ("1,1-DCE"), 1,1-dichloroethane ("1,1-DCA"), and 1,2-dichloroethane ("1,2-DCA") were detected in the samples of groundwater collected from groundwater monitoring wells MW-1 through MW-5 on 3 February 1999. The analytical results for the samples of groundwater collected during this monitoring event were similar to the results of previous groundwater monitoring at the Site, with the following exceptions:

- 1,2-DCA was detected in the sample of groundwater collected from MW-4. This is the first time that 1,2-DCA has been detected in a sample of groundwater collected from the monitoring wells at the Site. 1,2-DCA has previously been detected in Hydropunch groundwater samples collected at the Site.
- TCE and c-1,2-DCE were not detected in the sample of groundwater collected at well MW-4. Both of these chemicals were detected in the sample of groundwater collected from well MW-4 on 5 November 1998.

As mentioned in the *Phase II Groundwater Investigation Report* by EKI, dated 30 June 1998, benzene and xylenes were detected in the samples of groundwater collected from the former off-site wells DIAL MW-4 and DIAL MW-5 (Dial Corporation). These chemicals have not been detected in any of the samples of groundwater collected from the monitoring wells at the Site.

2.2.3. Quality Assurance/Quality Control for Groundwater Chemical Analyses

Standard laboratory QA/QC procedures used for the project included analysis of matrix spikes, matrix spike duplicates, a quality control check spike sample, and a method blank. The percent recoveries of matrix spikes, matrix spike duplicates, and the quality control check spike sample were within acceptable ranges. No analytes were detected in the method blank samples analyzed for this project. QA/QC results are provided with the laboratory reports in Appendix B.

EKI also collected a duplicate groundwater sample from well MW-5. The two samples collected from MW-5 had the same four analytes present above detection limits. The relative percentage differences ("RPDs") for these analytes ranged form 8.5 to 12.7. These RPDs indicate that an acceptable sampling and analytical reproducibility exists.

3. SOIL REMEDIATION

EKI has submitted a *Work Plan for Soil Vapor Extraction*, dated 4 April 1999, to the California Regional Water Quality Control Board. Upon approval of this Work Plan, EKI will remove the clarifier at the Site and begin operation of a soil vapor extraction ("SVE") system at the Site. The work plan proposes a six month period of operation for the system, at which time system performance will be evaluated. A discussion of the soil remediation activities performed during the period of April through June 1999 will be presented in the next Quarterly Report.

4. SUMMARY OF FINDINGS

Monthly gauging of the groundwater table elevation was performed at the groundwater monitoring wells at the Site on 19 January, 3 February, and 30 March 1999. Quarterly groundwater sampling was performed at the groundwater monitoring wells at the Site on 3 February 1999. The direction of groundwater flow was estimated to be toward the south under both the Webb and Reliable Steel properties. This is consistent with previous groundwater monitoring at the Site.

Chemical analyses of groundwater samples collected during this monitoring event detected PCE, c-1,2-DCE, t-1,2-DCE, 1,1-DCA, 1,2-DCA, and 1,1-DCE. The detected concentrations of TCE were generally higher than the concentrations of the other VOCs detected in each sample. The results of these analyses are generally consistent with prior sampling and analysis of groundwater collected at the Site. The highest concentration of TCE was detected in the sample of groundwater collected from well MW-1 (27,000 ug/l) near the building on the Webb property. TCE was not detected in the groundwater sample collected from well MW-4 located downgradient of the Reliable Steel property.

EKI submitted a work plan to the RWQCB for removal of the clarifier at the Site and for operation of a SVE system at the Site for a six month period of operation. The initial results of these soil remediation activities will be documented in the next quarterly monitoring report.

5. REFERENCES

Erler & Kalinowski, Inc., 18 February 1998. *Phase II Soil Investigation Report for the Jervis B. Webb Company Property at 5030 Firestone Boulevard in South Gate, California.*

Erler & Kalinowski, Inc., 30 June 1998. *Phase II Groundwater Investigation Report for the Jervis B. Webb Company Property at 5030 Firestone Boulevard in South Gate, California.*

Erler & Kalinowski, Inc., 13 January 1999. *Additional Groundwater Investigation and Quarterly Monitoring Report for October to December 1998, Jervis B. Webb Company Property, 5030 Firestone Boulevard, South Gate, California.*

U.S. Geological Survey, 1964, photo-revised 1981. *South Gate, California Quadrangle, 7.5 Minute Series.*

TABLE 1

Groundwater Elevations in Monitoring Wells

Quarterly Groundwater Monitoring and Soil Remediation Report

Jervis B. Webb Company, 5030 Firestone Boulevard, South Gate, California

Well ID	Date	Elevation of Top-of-Casing (ft msl)	Depth to Water (ft bgs)	Elevation of Water Surface (ft msl)	Comments
MW-1	2/27/98	106.09	44.79	61.30	
	3/2/98	106.09	44.82	61.27	
	3/4/98	106.09	44.58	61.51	
	4/8/98	106.09	44.57	61.52	
	5/20/98	106.09	43.99	62.10	
	10/8/98	106.09	43.38	62.71	
	11/5/98	106.09	43.14	62.95	
	12/21/98	106.09	43.37	62.72	
	1/19/99	106.09	43.26	62.83	
	2/3/99	106.09	42.98	63.11	
	3/30/99	106.09	43.22	62.87	
MW-2	2/27/98	106.65	44.02	62.63	
	3/2/98	106.65	44.06	62.59	
	3/4/98	106.65	44.13	62.52	
	4/8/98	106.65	NR	--	Truck parked on well.
	5/20/98	106.65	43.51	63.14	
	10/8/98	106.65	42.84	63.81	
	11/5/98	106.65	42.64	64.01	
	12/21/98	106.65	42.69	63.96	
	1/19/99	106.65	42.66	63.99	
	2/3/99	106.65	42.55	64.10	
	3/30/99	106.65	42.63	64.02	
MW-3	2/27/98	105.87	44.55	61.32	
	3/2/98	105.87	44.56	61.31	
	3/4/98	105.87	44.40	61.47	
	4/8/98	105.87	44.39	61.48	
	5/20/98	105.87	43.80	62.07	
	10/8/98	105.87	43.26	62.61	
	11/5/98	105.87	43.60	62.27	
	12/21/98	105.87	43.33	62.54	
	1/19/99	105.87	43.18	62.69	
	2/3/99	105.87	42.97	62.90	
	3/30/99	105.87	43.19	62.68	
MW-4	11/3/98	104.72	42.77	61.95	Well Developed
	11/5/98	104.72	42.64	62.08	
	12/21/98	104.72	42.93	61.79	
	1/19/99	104.72	42.80	61.92	
	2/3/99	104.72	42.63	62.09	
	3/30/99	104.72	42.89	61.83	

TABLE 1

Groundwater Elevations in Monitoring Wells

Quarterly Groundwater Monitoring and Soil Remediation Report

Jervis B. Webb Company, 5030 Firestone Boulevard, South Gate, California

Well ID	Date	Elevation of Top-of-Casing (ft msl)	Depth to Water (ft bgs)	Elevation of Water Surface (ft msl)	Comments
MW-5	11/3/98	106.13	43.32	62.81	Well Developed
	11/5/98	106.13	43.30	62.83	
	12/21/98	106.13	43.58	62.55	
	1/19/99	106.13	43.46	62.67	
	2/3/99	106.13	43.20	62.93	
	3/30/99	106.13	43.49	62.64	

NOTES: Abbreviations:

ft msl = feet above mean sea level
ft bgs = feet beneath ground surface
NR = Not Recorded
-- Not Applicable

1. Monitoring well northing and easting coordinates and top-of-casing elevations for wells MW-1, MW-2, and MW-3 were surveyed on 6 March 1998 by Rattray & Associates, Inc.
2. Monitoring well northing and easting coordinates and top-of-casing elevations for wells MW-4 and MW-5 were surveyed on 21 December 1998 by Rattray & Associates, Inc.

TABLE 2
Analytical Results for Monitoring Well Groundwater Samples

Quarterly Groundwater Monitoring and Soil Remediation Report

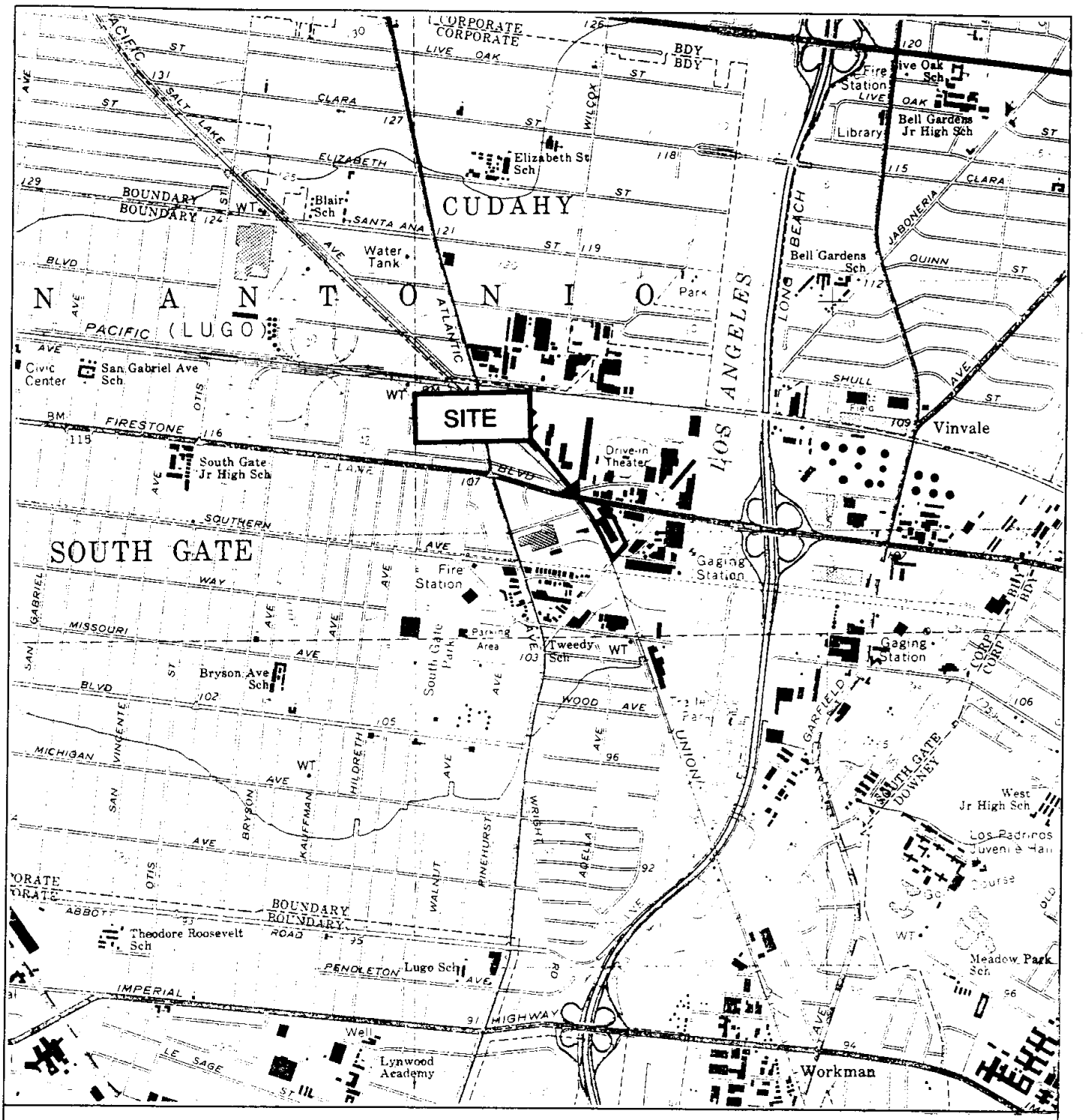
Jervis B. Webb Company, 5030 Firestone Boulevard, South Gate, California

Well ID	Sample Number	Sample Date	Analyte Concentration										
			Benzene (ug/l)	Toluene (ug/l)	Xylenes (ug/l)	1,1-DCA (ug/l)	1,1-DCE (ug/l)	1,2-DCA (ug/l)	c-1,2-DCE (ug/l)	t-1,2-DCE (ug/l)	PCE (ug/l)	TCE (ug/l)	TDS (mg/l)
MW-1	MW-1-0304	3/4/98	<100	<100	<100	<100	220	<100	130	<100	140	24,000	--
	MW-1-0304DUP	3/4/98	<100	<100	<100	<100	210	<100	150	<100	160	25,000	--
	MW-1-0520	5/20/98	<125	<125	<125	<125	160	<125	130	<125	<125	24,000	1,500
	MW-1	11/5/98	<125	<125	<125	<125	140	<125	160	<125	170	28,000	--
	MW-1	2/3/99	<125	<125	<125	<125	130	<125	160	<125	160	27,000	--
MW-2	MW-2-0304	3/4/98	<10	<10	<10	13	34	<10	65	<10	<10	2,700	--
	MW-2-0520	5/20/98	<10	<10	<10	14	38	<10	68	<10	<10	3,000	2,500
	MW-2	11/5/98	<10	<10	<10	13	36	<10	68	<10	<10	3,200	--
	MW-2	2/3/99	<10	<10	<10	13	36	<10	70	<10	<10	3,200	--
MW-3	MW-3-0304	3/4/98	<10	13	<10	14	82	<10	200	<10	<10	2,800	--
	MW-3-0520	5/20/98	<10	<10	<10	13	58	<10	230	15	<10	2,800	1,100
	MW-3	11/5/98	<10	<10	<10	11	66	<10	240	18	<10	2,300	--
	MW-3	2/3/99	<10	<10	<10	11	64	<10	220	18	<10	2,000	--
MW-4	MW-4	11/5/98	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.67	<0.5	<0.5	6.7	--
	MW-4	2/3/99	<0.5	<0.5	<0.5	<0.5	<0.5	2.1	<0.5	<0.5	<0.5	<0.5	--
MW-5	MW-5	11/5/98	<25	<25	<25	<25	42	<25	380	30	<25	5,000	--
	MW-5-DUP	11/5/98	<25	<25	<25	<25	40	<25	360	29	<25	4,800	--
	MW-5	2/3/99	<25	<25	<25	<25	49	<25	420	35	<25	5,100	--
	MW-5-DUP	2/3/99	<25	<25	<25	<25	45	<25	370	31	<25	4,500	--

NOTES:

1,1-DCA = 1,1-dichloroethane
1,1-DCE = 1,1-dichloroethene
1,2-DCA = 1,2-dichloroethane
c-1,2-DCE = cis-1,2-dichloroethene
t-1,2-DCE = trans-1,2-dichloroethene
PCE = tetrachloroethene
TCE = trichloroethene
TDS = total dissolved solids
VOCs = volatile organic compounds
Xylenes = total Xylene isomers
mg/l = milligrams per liter
ug/l = micrograms per liter
-- indicates not analyzed

1. Analyses performed by Orange Coast Analytical, Inc. using EPA Method 8260 for VOCs and EPA Method 160.1 for TDS.
1. < indicates that the analyte was not detected at a concentration above the indicated method detection limit.

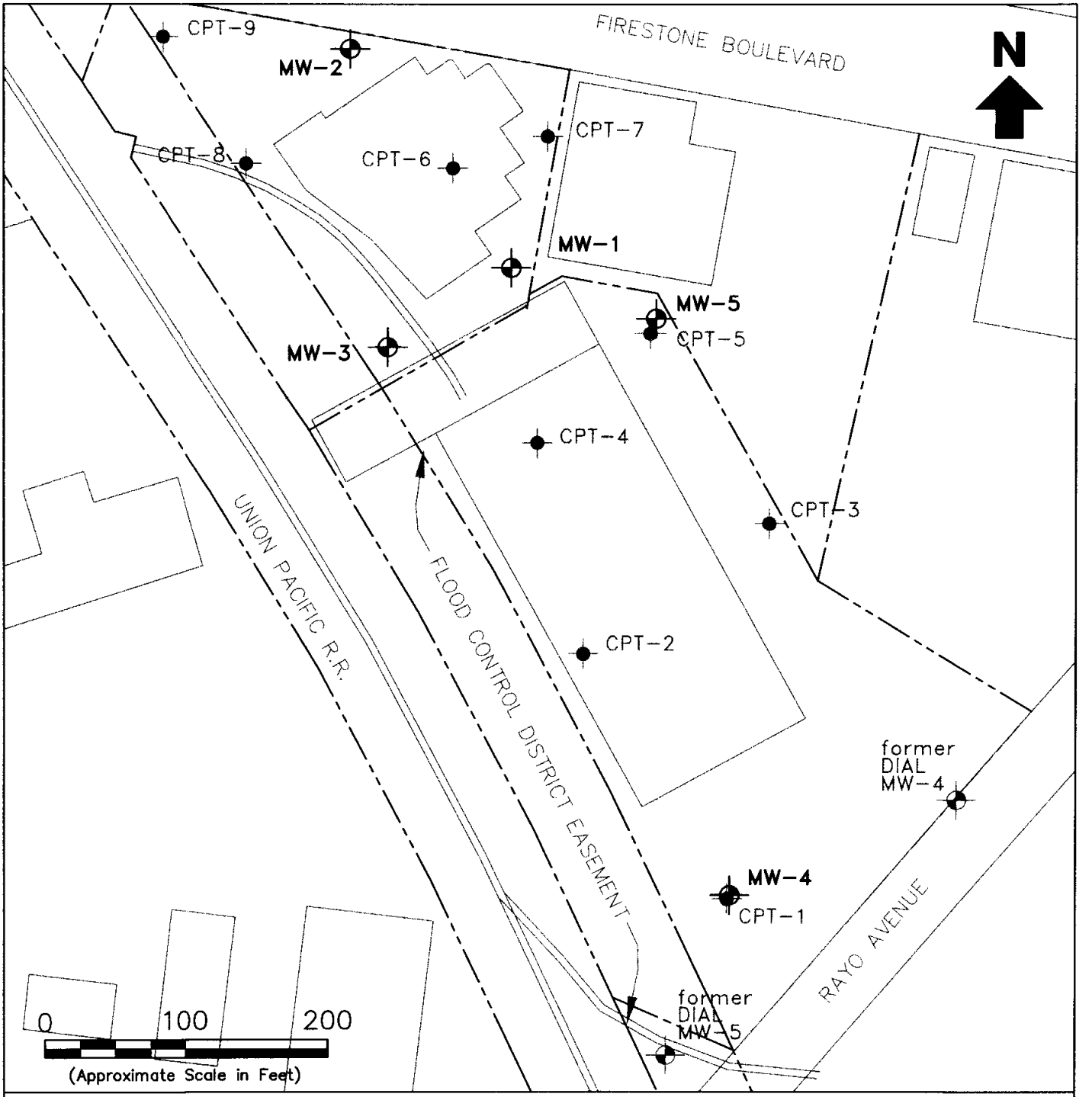


Erler & Kalinowski, Inc.

Site Location Map

Jervis B. Webb Company
South Gate, California
June 1999
EKI 961025.02
Figure 1

Source: U.S.G.S 7.5 Minute Series "South Gate" Quadrangle, 1964, photorevised 1981.



LEGEND

- MW-3 — Groundwater Monitoring Well with Groundwater Elevation (msl)
- Former DIAL Monitoring Well
- PIPP Groundwater Sample Location
- Property Line/Boundary

Erler & Kalinowski, Inc.

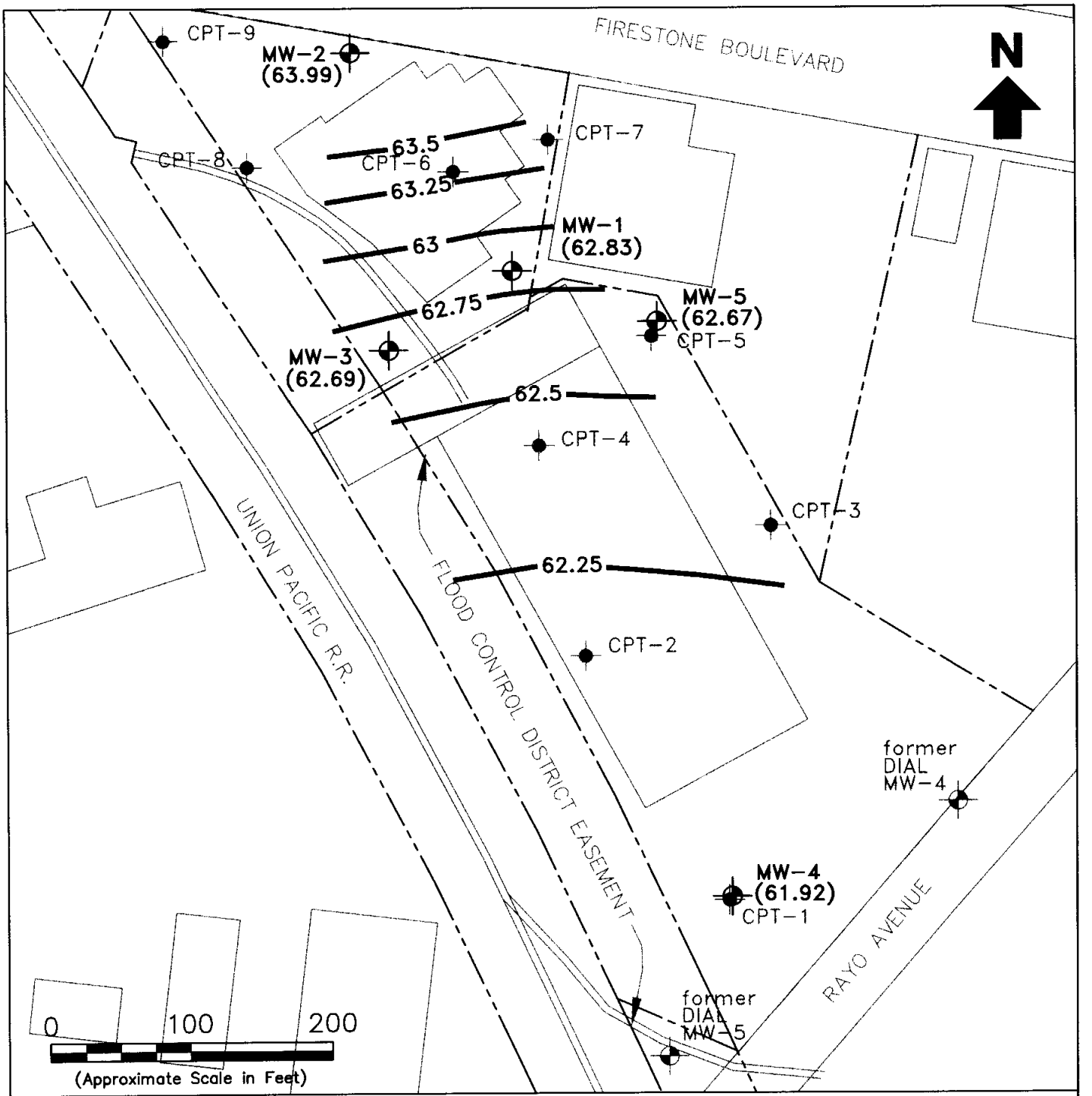
Monitoring Well Locations

Notes:

1. All locations are approximate.
2. Information related to PIPP groundwater sampling and monitoring at the former DIAL wells is provided in Additional Groundwater Investigation and Quarterly Monitoring Report, by Erler & Kalinowski, Inc., dated 13 January 1999 and Adjacent Property Review report, by Emcon Associates, dated 2 November 1995, respectively.

Jervis B. Webb Company
South Gate, California
June 1999
EKI 961025.02

Figure 2



LEGEND

- Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)
- MW-3 (62.61) — Groundwater Monitoring Well with Groundwater Elevation (msl)
- Former DIAL Monitoring Well
- PIPP Groundwater Sample Location
- Property Line/Boundary

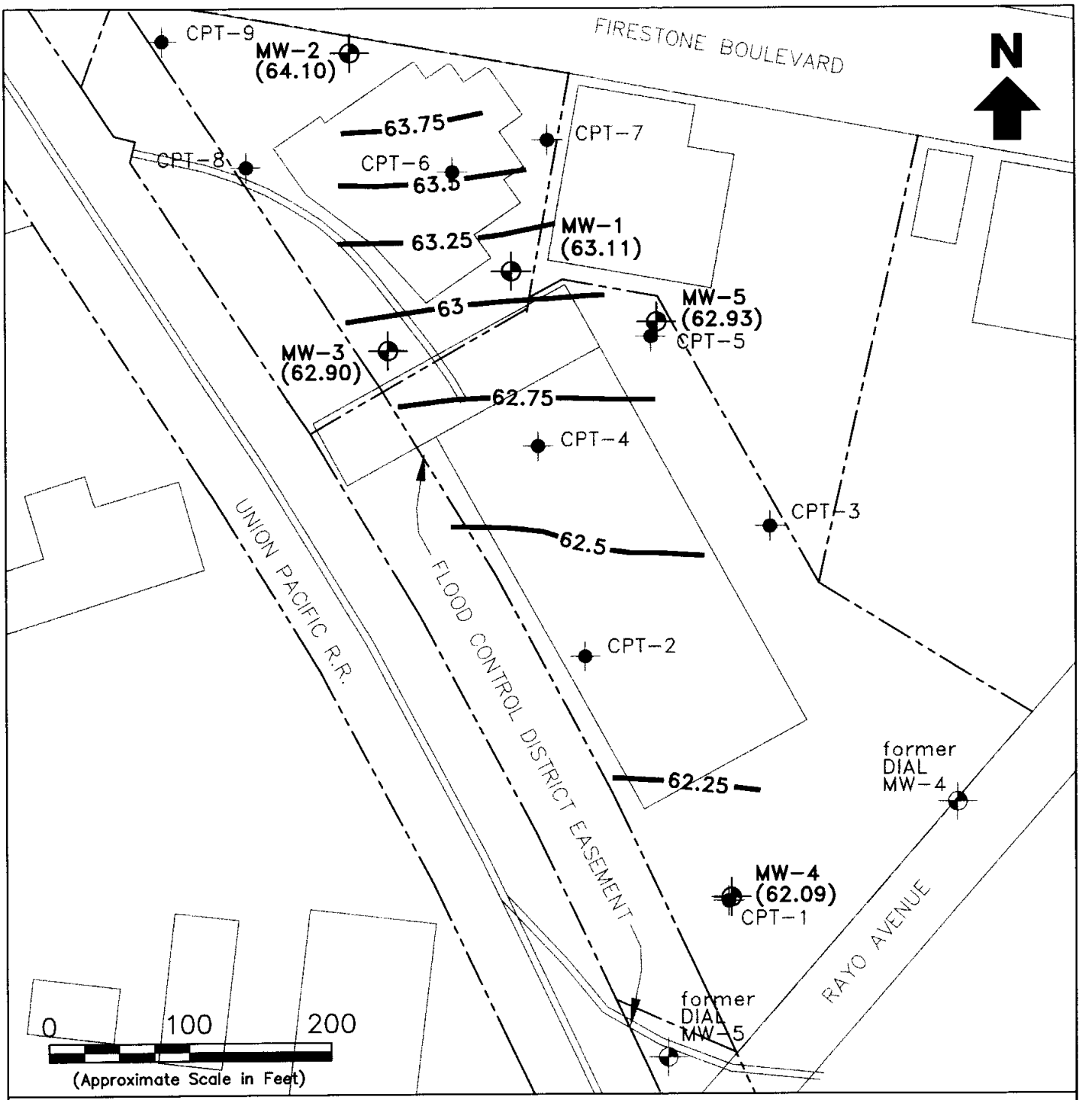
Notes:

1. All locations are approximate.
2. Information related to PIPP groundwater sampling and monitoring at the former DIAL wells is provided in Additional Groundwater Investigation and Quarterly Monitoring Report, by Erler & Kalinowski, Inc., dated 13 January 1999 and Adjacent Property Review report, by Emcon Associates, dated 2 November 1995, respectively.

Erler & Kalinowski, Inc.

Elevation of the Groundwater Table On 19 January 1999

Jervis B. Webb Company
South Gate, California
June 1999
EKI 961025.02
Figure 3



LEGEND

- Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)
- MW-3 (62.61) — Groundwater Monitoring Well with Groundwater Elevation (msl)
- Former DIAL Monitoring Well
- PIPP Groundwater Sample Location
- Property Line/Boundary

Notes:

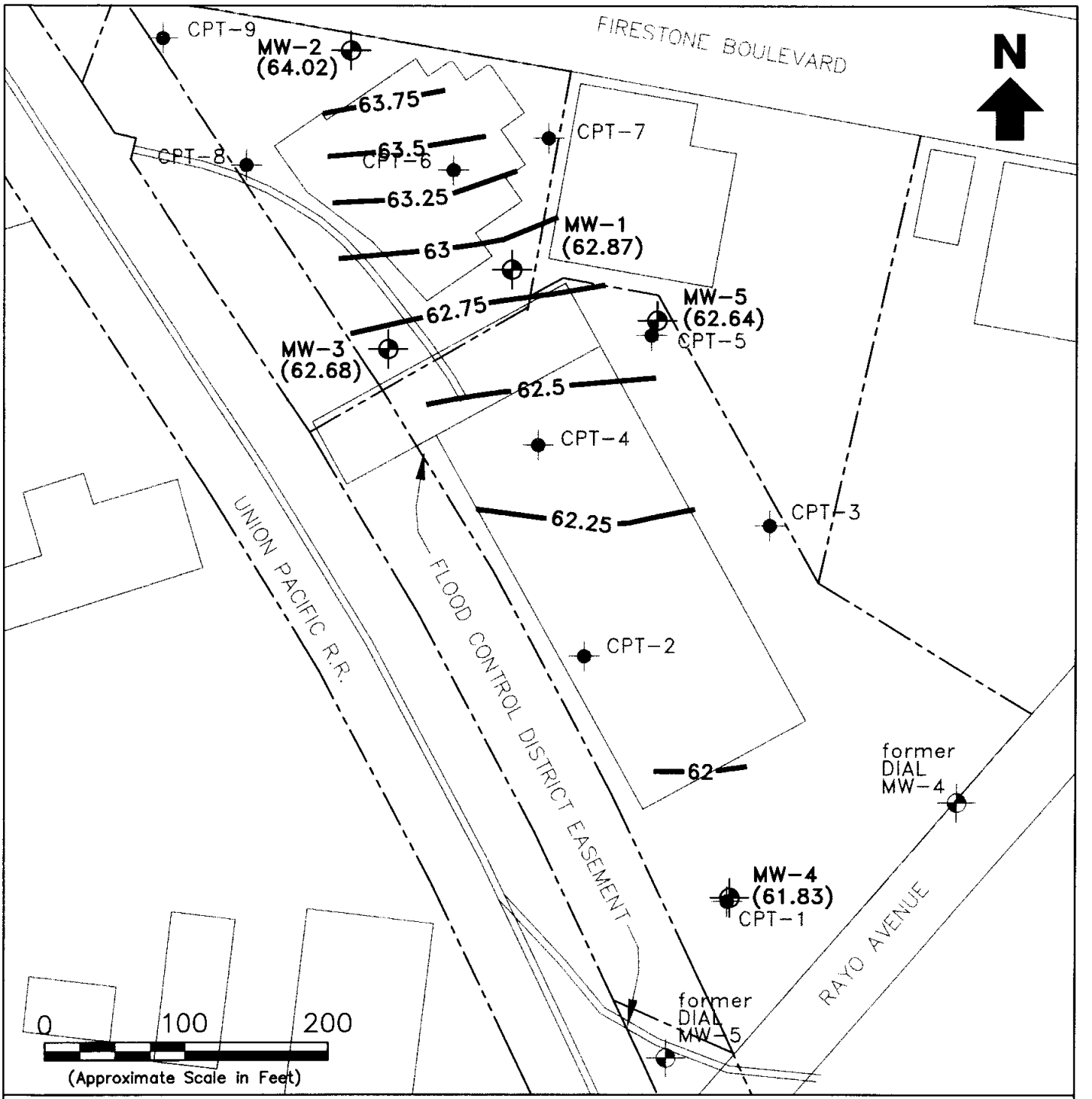
1. All locations are approximate.
2. Information related to PIPP groundwater sampling and monitoring at the former DIAL wells is provided in Additional Groundwater Investigation and Quarterly Monitoring Report, by Erler & Kalinowski, Inc., dated 13 January 1999 and Adjacent Property Review report, by Emcon Associates, dated 2 November 1995, respectively.

Erler & Kalinowski, Inc.

Elevation of the Groundwater Table On 3 February 1999

Jervis B. Webb Company
South Gate, California
June 1999
EKI 961025.02

Figure 4



LEGEND

- Contour Representing the Elevation of the Groundwater Table in Feet Above Mean Sea Level (msl)
- MW-3 (62.61) — Groundwater Monitoring Well with Groundwater Elevation (msl)
- Former DIAL Monitoring Well
- PIPP Groundwater Sample Location
- Property Line/Boundary

Notes:

1. All locations are approximate.
2. Information related to PIPP groundwater sampling and monitoring at the former DIAL wells is provided in Additional Groundwater Investigation and Quarterly Monitoring Report, by Erler & Kalinowski, Inc., dated 13 January 1999 and Adjacent Property Review report, by Emcon Associates, dated 2 November 1995, respectively.

Erler & Kalinowski, Inc.

Elevation of the Groundwater Table On 30 March 1999

Jervis B. Webb Company
South Gate, California
June 1999
EKI 961025.02

Figure 5

APPENDIX A

Groundwater Purge and Water Quality Monitoring Forms for Groundwater Sampling

GROUNDWATER PURGE AND WATER QUALITY MONITORING FORM

Erler & Kalinowski, Inc.

PROJECT NAME: DATE:

PROJECT NUMBER: WELL NUMBER: PERSONNEL:

WELL VOLUME CALCULATION:

Depth of Well (ft.)		Depth to Water (ft.)		Water Column (ft.)	Multiplier (below)	Casing Vol. (gallons)
~70'	-	42.98'	=	27.02'	* 0.64	=

Mult. for casing diam. = 2-in.=0.16; 4-in.=0.64; 5-in.=1.02; 6-in.=1.44 gals/ft.

No. of bailers prior to start of purge: 0

PURGE METHOD: 2" submersible pump

PURGE DEPTH: ~45'

START TIME: 13:38 END TIME: 14:06

TOTAL GALLONS PURGED: 55

INSTRUMENT CALIBRATION

Instrument	Field measure	Standard measure
Conductivity		
pH	See log for well MW-4	
pH		
Turbidity		
Temperature		
Depth Probe		

Time	13:46	13:54	14:05					
Volume Purged (gallons)	20	30	40					
Temperature (degrees F or C)	70.1	70.3	69.9					
pH (units)	7.25	7.38	7.32					
Specific Conductivity (uS/cm)	1.61	1.71	1.78					
Turbidity/Color (NTU)	9.80	2.12	1.97					
Odor								
Depth to Water (ft below TOC) during purge								
Number of Casing Volumes removed								
Purge Rate (gallons/minute)								

COMMENTS/ SAMPLES:	Field I.D.	Time Collected	Containers & Preservation	Analyses Requested
	MW-1	14:10	2 x VOA w/ HCl	8260

GROUNDWATER PURGE AND WATER QUALITY MONITORING FORM

Erler & Kalinowski, Inc.

PROJECT NAME: DATE:

PROJECT NUMBER: 961025.02 WELL NUMBER: MW-2 PERSONNEL: RCH

WELL VOLUME CALCULATION:

Depth of Well (ft.)		Depth to Water (ft.)		Water Column (ft.)		Multiplier (below)		Casing Vol. (gallons)
270'	-	42.55'	=	27.45'	*	0.64	=	

Mult. for casing diam. = 2-in.=0.16; 4-in.=0.64; 5-in.=1.02; 6-in.=1.44 gals/ft.

No. of bailers prior to start of purge: 0

PURGE METHOD: 2" SUBMERSIBLE PUMP

PURGE DEPTH: 45

START TIME: 10:24 END TIME: 10:58

TOTAL GALLONS PURGED: 70+

INSTRUMENT CALIBRATION

Instrument	Field measure	Standard measure
Conductivity		
pH	SEE LOG FOR WELL MW-4	
pH		
Turbidity		
Temperature		
Depth Probe		

Time	10:32	10:36	10:44	10:48	10:52	10:56		
Volume Purged (gallons)	20	30	40	50	60	70		
Temperature (degrees F or C)	69.9	69.6	68.5	68.0	68.1	68.7		
pH (units)	7.22	7.18	7.17	7.16	7.17	7.14		
Specific Conductivity (uS/cm)	2.29	2.95	3.19	3.26	3.61	3.56		
Turbidity/Color (NTU)	281	149	51.8	17.2	10.8	5.0		
Odor								
Depth to Water (ft below TOC) during purge								
Number of Casing Volumes removed								
Purge Rate (gallons/minute)	*	*						

COMMENTS/ SAMPLES:	Field I.D.	Time Collected	Containers & Preservation	Analyses Requested
	MW-2	11:05	2 x VOA w/HCl	8260

* FLOW RATE ADJUSTED (REDUCED)

GROUNDWATER PURGE AND WATER QUALITY MONITORING FORM

Erler & Kalinowski, Inc.

PROJECT NAME: DATE:

PROJECT NUMBER: 961025.02 WELL NUMBER: MW-3 PERSONNEL: RCH

WELL VOLUME CALCULATION:

Depth of Well (ft.)		Depth to Water (ft.)		Water Column (ft.)		Multiplier (below)		Casing Vol. (gallons)
~70'	-	42.97'	=	27.03'	*	0.64	=	17.29 ~~23.3~~ gals

Mult. for casing diam. = 2-in.=0.16; 4-in.=0.64; 5-in.=1.02; 6-in.=1.44 gals/ft.

No. of bailers prior to start of purge: Ø

PURGE METHOD: 2" SUBMERSIBLE PUMP

PURGE DEPTH: ~45'

START TIME: 11:30 END TIME: 12:30

TOTAL GALLONS PURGED: 55

INSTRUMENT CALIBRATION

Instrument	Field measure	Standard measure
Conductivity		
pH	SEE LOG FOR WELL MW-4	
pH		
Turbidity		
Temperature		
Depth Probe		

Time	11:40	11:50	12:00	12:10	12:20			
Volume Purged (gallons)	10	20	30	40	50			
Temperature (degrees F or C)	67.2	66.3	65.8	65.9	66.0			
pH (units)	7.31	7.23	7.31	7.31	7.30			
Specific Conductivity (uS/cm)	1.62	2.19	2.51	2.63	2.70			
Turbidity/Color (NTU)	87.1	8.21	2.03	2.24	2.1			
Odor								
Depth to Water (ft below TOC) during purge								
Number of Casing Volumes removed								
Purge Rate (gallons/minute)								

COMMENTS/ SAMPLES:	Field I.D.	Time Collected	Containers & Preservation	Analyses Requested
	MW-3	12:30	2 x VOA w/ HCl	8260

GROUNDWATER PURGE AND WATER QUALITY MONITORING FORM

Erler & Kalinowski, Inc.

PROJECT NAME: DATE:

PROJECT NUMBER: 961025.02 WELL NUMBER: MW-4 PERSONNEL: RCH

WELL VOLUME CALCULATION:

Depth of Well (ft.)		Depth to Water (ft.)		Water Column (ft.)		Multiplier (below)		Casing Vol. (gallons)
~70	-	42.63'	=	27.37'	*	0.64	=	

Mult. for casing diam. = 2-in.=0.16; 4-in.=0.64; 5-in.=1.02; 6-in.=1.44 gals/ft.

No. of bailers prior to start of purge: 0

PURGE METHOD: 2" submersible pump

PURGE DEPTH: 45'

START TIME: 9:26 END TIME: 9:57

TOTAL GALLONS PURGED: 55 gallons

INSTRUMENT CALIBRATION

Instrument	Field measure	Standard measure
Conductivity	1.08	1.00
pH	4.00	4.01
pH	7.04	7.00
Turbidity	0.20	0.20
Temperature	66.5	
Depth Probe		

Time	9:34	9:38	9:46	9:50				
Volume Purged (gallons)	20	30	40	50				
Temperature (degrees F or C)	67.5	68.3	68.7	69.0				
pH (units)	6.42	6.80	6.92	6.92				
Specific Conductivity (uS/cm)	3.92	3.62	3.64	3.65				
Turbidity/Color (NTU)	35.8	18.2	10.91	3.90				
Odor								
Depth to Water (ft below TOC) during purge								
Number of Casing Volumes removed								
Purge Rate (gallons/minute)								

COMMENTS/ SAMPLES:	Field I.D.	Time Collected	Containers & Preservation	Analyses Requested
	MW-4	10:00	2 x VOA w/ HCl	8260

GROUNDWATER PURGE AND WATER QUALITY MONITORING FORM

Erler & Kalinowski, Inc.

PROJECT NAME: DATE:

PROJECT NUMBER: 961025.02 WELL NUMBER: MW-5 PERSONNEL: KCH

WELL VOLUME CALCULATION:

Depth of Well (ft.)		Depth to Water (ft.)		Water Column (ft.)		Multiplier (below)		Casing Vol. (gallons)
~70'	-	43.20'	=	26.80'	*	0.64	=	

Mult. for casing diam. = 2-in.=0.16; 4-in.=0.64; 5-in.=1.02; 6-in.=1.44 gals/ft.

No. of bailers prior to start of purge: 0

PURGE METHOD: 2" SUBMERSIBLE PUMP

PURGE DEPTH: 45'

START TIME: 12:36 END TIME: 13:16

TOTAL GALLONS PURGED: 55

INSTRUMENT CALIBRATION

Instrument	Field measure	Standard measure
Conductivity	SEE LOG FOR	
pH	WELL MW-1	
pH		
Turbidity		
Temperature		
Depth Probe		

Time	12:46	12:56	13:06					
Volume Purged (gallons)	20	30	46					
Temperature (degrees F or C)	69.3	69.5	69.0					
pH (units)	7.28	7.35	7.27					
Specific Conductivity (uS/cm)	3.53	3.65	3.68					
Turbidity/Color (NTU)	11.5	3.2	1.79					
Odor								
Depth to Water (ft below TOC) during purge								
Number of Casing Volumes removed								
Purge Rate (gallons/minute)								

COMMENTS/ SAMPLES:	Field I.D.	Time Collected	Containers & Preservation	Analyses Requested
	MW-5	13:15	2 x VOA w/ HCl	8260
	MW-5-DUP	13:20	2 x VOA w/ HCl	8260

APPENDIX B

Laboratory Reports and Chain-of-Custody Forms for Groundwater Sampling

ORANGE COAST ANALYTICAL, INC.
3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970

ORANGE COAST ANALYTICAL THANKS YOU FOR YOUR BUSINESS

THE FOLLOWING PAGES ARE THE ANALYSIS REPORT

ON THE SAMPLES YOU REQUESTED.

IF YOU HAVE ANY QUESTIONS REGARDING THIS REPORT

PLEASE FEEL FREE TO CONTACT US.

ORANGE COAST ANALYTICAL, INC.
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4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970

LABORATORY REPORT FORM

Laboratory Name: ORANGE COAST ANALYTICAL, INC.

Address: 3002 Dow Suite 532 Tustin, CA 92780

Telephone: (714) 832-0064

Laboratory Certification
(ELAP) No.: 1416 Expiration Date: 2001

Laboratory Director's Name (Print) : Mark Noorani

Client: Erler & Kalinowski, Inc.

Project No.: 961025.02

Project Name: Webb

Laboratory Reference: EKI 10548

Analytical Method: EPA 8260

Date Sampled: 02/03/99
Date Received: 02/04/99
Date Reported: 02/05/99

Sample Matrix: Water

Chain of Custody Received: Yes

Laboratory Director's Signature: Mark Noorani

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ANALYTICAL TEST RESULTS 8260

Reporting Unit: ug/l

DATE ANALYZED		02/04/99	02/04/99	02/04/99	02/04/99
DILUTION FACTOR		1	1	20	20
LAB SAMPLE I.D.			99020050	99020051	99020052
CLIENT SAMPLE I.D.			MW-4	MW-2	MW-3
COMPOUND	*MDL*	*MB*			
Acetone	2.0	2.0	<2.0	<40	<40
Benzene	0.5	0.5	<0.5	<10	<10
Bromodichloromethane	0.5	0.5	<0.5	<10	<10
Bromoform	0.5	0.5	<0.5	<10	<10
Bromomethane	1.0	1.0	<1.0	<20	<20
2-Butanone	1.0	1.0	<1.0	<20	<20
Carbon Disulfide	0.5	0.5	<0.5	<10	<10
Carbon Tetrachloride	0.5	0.5	<0.5	<10	<10
Chlorobenzene	0.5	0.5	<0.5	<10	<10
Chlorodibromomethane	0.5	0.5	<0.5	<10	<10
Chloroethane	0.5	0.5	<0.5	<10	<10
2-Chloroethyl vinyl ether	1.0	1.0	<1.0	<20	<20
Chloroform	0.5	0.5	<0.5	<10	<10
Chloromethane	0.5	0.5	<0.5	<10	<10
1,1-Dichloroethane	0.5	0.5	<0.5	13	11
1,2-Dichloroethane	0.5	0.5	2.1	<10	<10
1,1-Dichloroethene	0.5	0.5	<0.5	36	64
cis 1,2-Dichloroethene	0.5	0.5	<0.5	70	220
Trans 1,2-Dichloroethene	0.5	0.5	<0.5	<10	18
1,2-Dichloropropane	0.5	0.5	<0.5	<10	<10
cis-1,3-Dichloropropene	0.5	0.5	<0.5	<10	<10
trans-1,3-Dichloropropene	0.5	0.5	<0.5	<10	<10
Ethylbenzene	0.5	0.5	<0.5	<10	<10
2-Hexanone	1.0	1.0	<1.0	<20	<20
Methylene chloride	2.5	2.5	<2.5	<50	<50
4-Methyl-2-pentanone	1.0	1.0	<1.0	<20	<20
Styrene	0.5	0.5	<0.5	<10	<10
1,1,2,2-Tetrachloroethane	0.5	0.5	<0.5	<10	<10
Tetrachloroethene	0.5	0.5	<0.5	<10	<10
Toluene	0.5	0.5	<0.5	<10	<10
1,1,1-Trichloroethane	0.5	0.5	<0.5	<10	<10
1,1,2-Trichloroethane	0.5	0.5	<0.5	<10	<10
Trichloroethene	0.5	0.5	<0.5	3,200	2,000
Trichlorofluoromethane	0.5	0.5	<0.5	<10	<10
Vinyl acetate	1.0	1.0	<1.0	<20	<20
Vinyl Chloride	0.5	0.5	<0.5	<10	<10
Total Xylenes	0.5	0.5	<0.5	<10	<10

SURROGATE	SPK	ACP%	MB			
RECOVERY	CONC		%RC			
Dibromofluoromethane	50	86-118	97	98	99	100
Toluene-d8	50	88-110	101	101	99	101
4-Bromofluorobenzene	50	86-115	99	98	97	100

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ANALYTICAL TEST RESULTS 8260
Reporting Unit: ug/l

DATE ANALYZED		02/04/99	02/04/99	02/04/99	02/04/99
DILUTION FACTOR		1	50	50	200
LAB SAMPLE I.D.			99020053	99020054	99020055
CLIENT SAMPLE I.D.			MW-5	MW-5-DUP	MW-1
COMPOUND	*MDL*	*MB*			
Acetone	2.0	2.0	<100	<100	<400
Benzene	0.5	0.5	<25	<25	<100
Bromodichloromethane	0.5	0.5	<25	<25	<100
Bromoform	0.5	0.5	<25	<25	<100
Bromomethane	1.0	1.0	<50	<50	<200
2-Butanone	1.0	1.0	<50	<50	<200
Carbon Disulfide	0.5	0.5	<25	<25	<100
Carbon Tetrachloride	0.5	0.5	<25	<25	<100
Chlorobenzene	0.5	0.5	<25	<25	<100
Chlorodibromomethane	0.5	0.5	<25	<25	<100
Chloroethane	0.5	0.5	<25	<25	<100
2-Chloroethyl vinyl ether	1.0	1.0	<50	<50	<100
Chloroform	0.5	0.5	<25	<25	<100
Chloromethane	0.5	0.5	<25	<25	<100
1,1-Dichloroethane	0.5	0.5	<25	<25	<100
1,2-Dichloroethane	0.5	0.5	<25	<25	<100
1,1-Dichloroethene	0.5	0.5	49	45	130
cis 1,2-Dichloroethene	0.5	0.5	420	370	160
Trans 1,2-Dichloroethene	0.5	0.5	35	31	<100
1,2-Dichloropropane	0.5	0.5	<25	<25	<100
cis-1,3-Dichloropropene	0.5	0.5	<25	<25	<100
trans-1,3-Dichloropropene	0.5	0.5	<25	<25	<100
Ethylbenzene	0.5	0.5	<25	<25	<100
2-Hexanone	1.0	1.0	<50	<50	<200
Methylene chloride	2.5	2.5	<125	<125	<500
4-Methyl-2-pentanone	1.0	1.0	<50	<50	<200
Styrene	0.5	0.5	<25	<25	<100
1,1,2,2-Tetrachloroethane	0.5	0.5	<25	<25	<100
Tetrachloroethene	0.5	0.5	<25	<25	160
Toluene	0.5	0.5	<25	<25	<100
1,1,1-Trichloroethane	0.5	0.5	<25	<25	<100
1,1,2-Trichloroethane	0.5	0.5	<25	<25	<100
Trichloroethene	0.5	0.5	5,100	4,500	27,000
Trichlorofluoromethane	0.5	0.5	<25	<25	<100
Vinyl acetate	1.0	1.0	<50	<50	<200
Vinyl Chloride	0.5	0.5	<25	<25	<100
Total Xylenes	0.5	0.5	<25	<25	<100

SURROGATE	SPK	ACP%	MB			
RECOVERY	CONC		%RC			
Dibromofluoromethane	50	86-118	97	107	99	100
Toluene-d8	50	88-110	101	97	99	100
4-Bromofluorobenzene	50	86-115	99	96	97	98

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8260 QA / QC REPORT
Reporting Unit : µg/l

1 . Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date Performed : 02/04/99

LAB Sample I . D . : 99020050

Analyte	R1	SP CONC	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD
1,1-Dichloroethene	0.0	20	19	18	95	90	5	61-145	14
Benzene	0.0	20	19	19	95	95	0	76-127	11
Trihloroethene	0.0	20	19	19	95	95	0	71-120	14
Toluene	0.0	20	18	18	90	90	0	76-125	13
Chlorobenzene	0.0	20	19	20	95	100	5	75-130	13

R1 = Result of Laboratory Sample I.D.
SPK CONC = Spiking Concentration ($\leq$5 X PQL) ; PQL = Practical Quantitation Limit.
MS = Matrix Spike Result
MSD = Matrix Spike Duplicate Result
%MS = Percent Recovery of MS: {(MS-R1)/SP} X 100.
%MSD = Percent Recovery of MSD: {(MSD-R1)/SP} X 100.
RPD = Relative Percent Difference: {(MS - MSD)/(MS + MSD)} X 100 X 2
ACP%MS(MSD) = Acceptable Range of Percent.
ACP RPD = Acceptable Relative Percent Difference

2 . Laboratory Quality Control check sample

Date Performed : 02/04/99

LAB Sample I . D . :OCA 5656

ANALYTE	SPK CONC	RESULTS	%RECOVERY	ACP %
1,1-Dicholoroethane	50	48	96	80 -120
Carbon tetrachloride	50	48	96	80 -120
Ethylbenzene	50	44	88	80 -120
Tetrachloroethene	50	47	94	80 -120

ANALYST: Mitra Samiei DATE: 02/04/99

CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

Erler & Kalinowski, Inc.

Project Number: 961025.02

Project Name: WEBB

Source of Samples: 5030 Firestone / 9301 MAYO

Location: MONITORING WELLS

Analytical Laboratory: ORANGE COAST

Date Sampled: 2/3/99

Sampled By: RCH

Report Results To: Steve Millen

Phone Number: (310) 314-8055

Lab Sample I D	Field Sample I D	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
	MW-4	WATER	2 x VOA w/ HCl	10:00	8260	NORMAL
	MW-2	WATER	2 x VOA w/ HCl	11:05	8260	
	MW-3	WATER	2 x VOA w/ HCl	12:30	8260	
	MW-5	WATER	2 x VOA w/ HCl	13:15	8260	
	MW-5-DUP	WATER	2 x VOA w/ HCl	13:20	8260	
	MW-1	WATER	2 x VOA w/ HCl	14:10	8260	

Special Instructions:

PLEASE REPORT RESULTS USING RWQCB LAB FORMAT 10A

Relinquished By:
Name / Signature / Affiliation

ROB HESSE / [signature] / EKI

Date: 2/3/99

Time: 17:00

SENT FED-EX 2/3/99

Received By:
Name / Signature / Affiliation

[signature] 2-4-99 9:30 am

001763